

# WEST Search History

DATE: Monday, March 18, 2002

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>			
L7	l6 same ((silicon adj1 carbide) or SiC!)	1	L7
L6	solid adj1 state adj1 grow\$6	59	L6
L5	l4 same ((silicon adj1 carbide) or SiC!)	0	L5
L4	solid adj1 state adj1 (anneal\$4 or crystal\$7)	317	L4
L3	l1 same ((silicon adj1 carbide) or SiC!)	2	L3
L2	l1 same ((silicon adj1 carbide) or SiC!)	2	L2
L1	solid adj1 phase adj1 (anneal\$4 or crystal\$7)	293	L1

END OF SEARCH HISTORY

(FILE 'HOME' ENTERED AT 12:52:29 ON 18 MAR 2002)

FILE 'CAPLUS' ENTERED AT 12:52:45 ON 18 MAR 2002

L1        1707 S SOLID (1W) (STATE OR PHASE) (1W) (GROW? OR ANNEAL? OR CRYSTAL  
L2              19 S L1 AND ((SILICON (1W) CARBIDE) OR SIC)  
L3        128 S RECRYSTAL? (2A) ((SILICON (1W) CARBIDE) OR SIC)  
L4        36 S L3 AND (ANNEAL? OR SOLID OR (HEAT (1W) TREAT?))  
L5        36 S L4 NOT L2

FILE 'INSPEC' ENTERED AT 13:08:27 ON 18 MAR 2002

L6        54 S L2

FILE 'STNGUIDE' ENTERED AT 13:17:23 ON 18 MAR 2002

FILE 'INSPEC' ENTERED AT 13:18:27 ON 18 MAR 2002

L7        25 S L4  
L8        22 S L7 NOT L6

=>

(thermal; defect-free silicon carbide single crystal and its growth by hot CVD and annealing)

IT 409-21-2P, Silicon carbide, properties  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(defect-free silicon carbide single crystal and its growth by hot CVD and annealing)

L5 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2002 ACS  
AN 1976:97937 CAPLUS  
DN 84:97937  
TI Study of recrystallization of silicon carbide thin films  
AU Dubey, Madan  
CS Dep. Phys., Banaras Hindu Univ., Banaras, India  
SO Mater. Res. Bull. (1976), 11(2), 197-202  
CODEN: MRBUAC  
DT Journal  
LA English  
CC 75-1 (Crystallization and Crystal Structure)  
AB Thin films of SiC were prep'd. by electron beam evapn. by using 6H, 15R, 4H and other polytypes as starting materials. After pulse-annealing in electron microscope column, various complex structures of hexagonal and cubic phases are obsd. The occurrence of 6H as single phase is rare.  
ST silicon carbide polytype film; annealing silicon carbide polytype  
IT Polytypism  
(of silicon carbide films, effect of annealing on)  
IT 409-21-2, properties  
RL: PRP (Properties)  
(film deposition and polytypism of, effect of annealing on)

L5 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2002 ACS  
AN 1974:469422 CAPLUS  
DN 81:69422  
TI Recrystallization of silicon carbide thin films  
AU Dubey, Madan; Singh, Govind  
CS Dep. Phys., Banaras Hindu Univ., Banaras, India  
SO J. Phys. D (1974), 7(11), 1482-4  
CODEN: JPAPBE  
DT Journal  
LA English  
CC 70-1 (Crystallization and Crystal Structure)  
AB Thin films of SiC were prep'd. by electron-beam evapn. By being pulse-annealed in the electron microscope, as-deposited noncryst. films recrystallize and grow, first in polycryst. 2H and 3C phases and subsequently into syntactic 2H and 3C single crystals.  
ST silicon carbide film crystn  
IT Crystallization  
(of silicon carbide thin films)  
IT 409-21-2, properties  
RL: PRP (Properties)  
(crystn. of thin films of)

SWER 6 OF 36 CAPLUS COPYRIGHT 2002 ACS

AN 1999:345726 CAPLUS

DN 130:359608

TI Silicon carbide single crystal with minimized defects and impurities and its growth by CVD and annealing  
IN Tanino, Yoshiya; Hiramoto, Masanobu  
PA Nippon Pillar Packing Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C30B029-36

ICS C30B025-18

CC 75-1 (Crystallography and Liquid Crystals)

Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11147795	A2	19990602	JP 1997-315127	19971117
	JP 3043690	B2	20000522		
	TW 416998	B	20010101	TW 1998-87117866	19981028
	EP 916749	A1	19990519	EP 1998-121098	19981106
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6203772	B1	20010320	US 1998-186662	19981106
	RU 2154698	C2	20000820	RU 1998-121013	19981116
PRAI	JP 1997-315127	A	19971117		

AB The process comprises these steps; depositing a polycryst. .alpha.- or .beta.-SiC film on an .alpha.-SiC substrate thermochem., polishing the surface of the deposition film, contacting a pair of the composite from the deposition-film side so that the crystal axis in the two film might be in the same direction, and annealing to recrystallize the polycryst. SiC and to grow single crystals oriented in the same direction to the crystal axis in the substrate. The single crystal is useful for LED and lasers.

ST CVD silicon carbide recrystn annealing; defect free silicon carbide crystal LED

IT Chemical vapor deposition

(hot; manuf. of defect-free silicon carbide single crystal by hot CVD and annealing)

IT Annealing

Recrystallization

(manuf. of defect-free silicon carbide single crystal by hot CVD and annealing)

IT 409-21-2P, Silicon carbide, properties

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(.alpha.-; manuf. of defect-free silicon carbide single crystal by hot CVD and annealing)

L5 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2002 ACS

AN 1999:345724 CAPLUS

DN 130:359606

TI Defect-free silicon carbide single crystal and its growth by hot CVD and annealing

IN Tanino, Yoshiya

PA Nippon Pillar Packing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C30B029-36

ICS C30B025-18

CC 75-1 (Crystallography and Liquid Crystals)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11147793	A2	19990602	JP 1997-315125	19971117
	JP 3043688	B2	20000522		
AB	The process comprises these steps; depositing an .alpha.-2H-SiC/.beta.-3C-SiC mixed layer on an .alpha.-SiC (I) single crystal support by thermochem. deposition and annealing the mixed layer to convert it into I and orienting crystal axis of the newly formed I in the same direction to that in the substrate. The resulted single crystal is useful for substrates of electronic devices and of LED.				
ST	defect free silicon carbide crystal growth; annealing crystal axis orientation silicon carbide; CVD annealing defect free silicon carbide				
IT	<b>Annealing</b> Crystal defects <b>Recrystallization</b> (defect-free silicon carbide single crystal and its growth by hot CVD and annealing)				
IT	Chemical vapor deposition (hot; defect-free silicon carbide single crystal and its growth by hot CVD and annealing)				
IT	Electric apparatus (substrates; defect-free silicon carbide single crystal and its growth by hot CVD and annealing)				
IT	409-21-2P, Silicon carbide, properties RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (.alpha.; defect-free silicon carbide single crystal and its growth by hot CVD and annealing)				
L5	ANSWER 8 OF 36 CAPLUS COPYRIGHT 2002 ACS				
AN	1999:345723 CAPLUS				
DN	130:359605				
TI	Defect-free silicon carbide single crystal and its growth by hot CVD and annealing				
IN	Tanino, Yoshiya				
PA	Nippon Pillar Packing Co., Ltd., Japan				
SO	Jpn. Kokai Tokkyo Koho, 4 pp.				
	CODEN: JKXXAF				
DT	Patent				
LA	Japanese				
IC	ICM C30B029-36				
CC	ICS C23C016-26; C30B001-02; H01L033-00 75-1 (Crystallography and Liquid Crystals) Section cross-reference(s): 76				
FAN.CNT 1					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11147792	A2	19990602	JP 1997-315124	19971117
	JP 3043687	B2	20000522		
AB	The process comprises these steps; depositing .alpha.-2H-SiC (I) layer on .alpha.-SiC (II) substrate by hot CVD and annealing the composite to convert I into II and orienting crystal axis of newly-formed II in the same direction to that in the substrate. The resulted SiC crystal is useful for substrates of LED and of electronic devices.				
ST	silicon carbide crystal defect free growth; CVD crystal conversion annealing silicon carbide				
IT	<b>Annealing</b> Crystal defects <b>Recrystallization</b> (defect-free silicon carbide single crystal and its growth by hot CVD and annealing)				
IT	Electric apparatus (substrates; defect-free silicon carbide single crystal and its growth by hot CVD and annealing)				
IT	Chemical vapor deposition				